

Washington Status Factors

Elcode NLLEC3B060
Gname PSEUDOCYPHELLARIA RAINIERENSIS
Gcomname

Number of Occurrences

C = 21- 80

Comments 56 occurrences.

Number of Occurrences with Good Viability

Comments

Population Size

D = 1,000-2,500 individuals

Comments Esitimated 560 individuals in Washington; could be more.

Range Extent

F = 20,000-200,000 km² (about 8,000-80,000 square miles)

Comments West of the Cascades. About 26,400 square mile range in WA.

Area of Occupancy

G = 2,000-20,000 km² (500,000-5,000,000 acres)

LG = 20,000-200,000 km (about 12,500-125,000 miles)

Comments About 5,800 sqare miles.

Long-term Trend in Population Size, Extent of Occurrence, Area of Occupancy, and/or Number or Condition of Occurrences

U = Unknown. Long-term trend in population, range, area occupied, or number or condition of occurrences unknown

Comments

Short-term Trend in Population Size, Extent of Occurrence, Area of Occupancy, and/or Number or Condition of Occurrences

D = Declining. Decline of 10-30% in population, range, area occupied, and/or number or condition of occurrences

E = Stable. Population, range, area occupied, and/or number or condition of occurrences unchanged or remaining within $\pm 10\%$ fluctuation

Comments Logging immediately decreases individuals of this species. Edge effect decreases it more slowly, taking 2-10 years to kill an individual.

Threats

F = Widespread, low-severity threat. Threat is of low severity but affects (or would affect) most or a significant portion of the population, occurrences, or area. Ecological community occurrences are not threatened severely, with changes reversible and recovery moderately rapid.

Scope Moderate Severity Low Immediacy Moderate

Comments Threatened by logging.

Number of Appropriately Protected and Managed Occurrences

D = Many (13-40) occurrences appropriately protected and managed

Comments In WA, there are 38 protected occurrences. Riparian reserves not viable protection.

Intrinsic Vulnerability

B = Moderately Vulnerable. Species exhibits moderate age of maturity, frequency of reproduction, and/or fecundity such that populations generally tend to recover from decreases in abundance over a period of several years (on the order of 5-20 years or 2-5 generations); or species has moderate dispersal capability such that extirpated populations generally become reestablished through natural recolonization (unaided by humans). Ecological community occurrences may be susceptible to changes in composition and structure but tend to recover through natural processes given reasonable time (10-100 years).

Comments Although it reproduces at a good rate, reproduction is by isidia and lobules - heavy propagules that may be slow to disperse (D. Stone, pers. comm.). This species grows just as well in young forests as it does in old growth, but it cannot survive in clearcuts. Its absence from young forests is probably attributable to slow rates of dispersal and/or establishment. (Sillett, unpublished paper).

Environmental Specificity

B = Narrow. Specialist or community with key requirements common.

Comments Sensitive to edge effect, so edges and wetland reserves are not appropriate. "In the Willamette Forest of Oregon, less than 1/4 of land is covered by old-growth forest, and less than 1/3 of this area persists as an interior forest" (Sillett 1994).

Other Considerations

Edge effect important.

Edition 2/20/2003 **Edauthor** Daphne Stone

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Reasons

Known from 56 sites. Threatened by logging. Does not withstand clearcuts and vulnerable to edge effect. Riparian reserves not viable protection.

Heavy propagules may limit dispersal to appropriate habitat.

BCD Sources

New Sources

COSEWIC. June 15, 2000-last update. Current Species List. Online. Available: <http://www.cosewic.gc.ca/COSEWIC/Default.cfm>. Accessed 2000, June.

Sillett S. 1994. Growth rates of two epiphytic cyanolichen species at the edge and in the interior of a 200-year-

old Douglas fir forest in the west Cascades of OR. *Bryologist* 97(3): 321-324.

McCune, B. and L. Geiser. 1997. *Macrolichens of the Pacific Northwest*. Oregon State University Press, Corvallis, Oregon. A co-publication with the U.S. Department of Agriculture Forest Service. 386 pp.

Sillett, SC. 1997. Distribution and ecology of *Pseudocyphellaria rainierensis*, an epiphytic cyanolichen endemic to the Pacific Northwest. Pp. 254-260 in: Kaye, T.N, A. Liston, R.M. Love, D.L. Luoma, R.J. Meinke & M.V. Wilson (eds.). *Conservation and management of native plants and fungi*. Native Plant Society of Oregon, Corvallis.